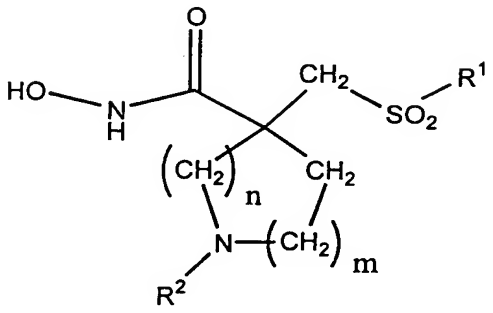
WHAT IS CLAIMED IS:

1. A compound corresponding to Formula I:



I

wherein

m is zero 1, 2 or 3;

n is zero, 1, or 2, and the sum of m plus n is 1, 2 or 3;

R^2 is hydrido, C_1-C_8 hydrocarbyl, C_1-C_6 hydrocarbyloxycarbonyl C_1-C_4 hydrocarbyl, aryl C_1-C_4 hydrocarbyl, heteroaryl C_1-C_4 hydrocarbyl, aryloxy C_1-C_4 hydrocarbyl, or heteroarylcxy C_1-C_4 hydrocarbyl; and

R^1 is a substituent containing a 5- or 6-membered cyclohydrocarbyl, heterocyclo, aryl or heteroaryl radical bonded directly to the depicted SO_2-group and having a length greater than about that of a hexyl group and less than about that of an eicosyl group, said R^1 defining a three-dimensional volume, when rotated about an axis drawn through the SO_2-bonded 1-position and the 4-position of a 6-membered ring radical or drawn through the SO_2-bonded 1-position and the center of 3,4-bond of a 5-membered

ring radical, whose widest dimension in a direction transverse to the axis of rotation is about that of one furanyl ring to about that of two phenyl rings.

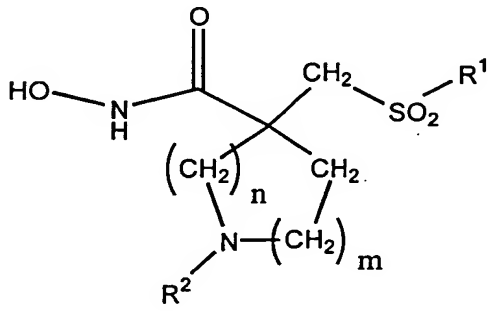
2. The compound according to claim 1 wherein said 5- or 6-membered cyclohydrocarbyl, heterocyclo, aryl or heteroaryl radical of R^1 is substituted with a substituent, R^3, that has a chain length of 3 to about 14 carbon atoms.

3. The compound according to claim 2 wherein said R^3 substituent is selected from the group consisting of a phenyl group, a phenoxy group, a thiophenoxy group, an anilino group, a phenylazo group, a phenylureido, a benzamido], a nicotinamido, an isonicotinamido, a picolinamido group, a heterocyclo, heterocyclohydrocarbyl, arylheterocyclohydrocarbyl, arylhydrocarbyl, heteroarylhydrocarbyl, heteroarylheterocyclohydrocarbyl, arylhydrocarbyloxyhydrocarbyl, aryloxyhydrocarbyl, hydrocarboylhydrocarbyl, arylhydrocarboylhydrocarbyl, arylcarbonylhydrocarbyl, arylazoaryl, arylhydrazinoaryl, hydrocarbylthiohydrocarbyl, hydrocarbylthioaryl, arylthiohydrocarbyl, heteroarylthiohydrocarbyl, hydrocarbylthioarylhydrocarbyl, arylhydrocarbylthiohydrocarbyl, arylhydrocarbylthioaryl, arylhydrocarbylamino, heteroarylhydrocarbylamino, and a heteroarylthio group.

4. The compound according to claim 3 wherein said R^3 substituent is itself substituted by one or more substituents selected from the group consisting of a halogen, hydrocarbyl, hydrocarbyloxy, nitro, cyano, perfluorohydrocarbyl, trifluoromethylhydrocarbyl, hydroxy, mercapto, hydroxycarbonyl, aryloxy, arylthio, arylamino, arylhydrocarbyl, aryl, heteroaryloxy, heteroarylthio, heteroarylamino, heteroarylhydrocarbyl, hydrocarbyloxycarbonylhydrocarbyl, heterocyclooxy, hydroxycarbonylhydrocarbyl, heterocyclothio, heterocycloamino, cyclohydrocarbyloxy, cyclohydrocarbylthio, cyclohydrocarbylamino, heteroarylhydrocarbyloxy, heteroarylhydrocarbylthio, heteroarylhydrocarbylamino, arylhydrocarbyloxy, arylhydrocarbylthio, arylhydrocarbylamino, heterocyclic, heteroaryl, hydroxycarbonyl-hydrocarbyloxy, alkoxycarbonylalkoxy, hydrocarbyloyl, arylcarbonyl, arylhydrocarbyloyl, hydrocarboyloxy, arylhydrocarboyloxy, hydroxyhydrocarbyl, hydroxyhydrocarbyloxy, hydrocarbylthio, hydrocarbyloxyhydrocarbylthio, hydrocarbyloxycarbonyl, hydroxycarbonylhydrocarbyloxy, hydrocarbyloxy-carbonylhydrocarbyl, hydrocarbylhydroxycarbonyl-hydrocarbylthio, hydrocarbyloxycarbonylhydrocarbyloxy, hydrocarbyloxycarbonylhydrocarbylthio, amino, hydrocarbylcarbonylamino, arylcarbonylamino, cyclohydrocarbylcarbonylamino, heterocyclohydrocarbylcarbonylamino, arylhydrocarbylcarbonylamino, heteroarylcarbonylamino,

heteroarylhydrocarbylcarbonylamino, heterocyclohydrocarbyloxy, hydrocarbylsulfonylamino, arylsulfonylamino, arylhydrocarbylsulfonylamino, heteroarylsulfonylamino, heteroarylhydrocarbylsulfonylamino, cyclohydrocarbylsulfonylamino, heterocyclohydrocarbylsulfonylamino and N-monosubstituted or N,N-disubstituted aminohydrocarbyl group, wherein the substituent(s) on the nitrogen are selected from the group consisting of hydrocarbyl, aryl, arylhydrocarbyl, cyclohydrocarbyl, arylhydrocarbyloxycarbonyl, hydrocarbyloxycarbonyl, and hydrocarboyl, or wherein the nitrogen and two substituents attached thereto form a 5- to 8-membered heterocyclic or heteroaryl ring group.

5. A compound corresponding to Formula I:



I

wherein

m is zero, 1, 2 or 3;

n is zero, 1, or 2, and the sum of m plus n is 1, 2 or 3;

R^2 is hydrido, C_1-C_8 hydrocarbyl, C_1-C_6 hydrocarbyloxycarbonyl C_1-C_4 hydrocarbyl, aryl C_1-C_4 hydrocarbyl, heteroaryl C_1-C_4 hydrocarbyl, aryloxy C_1-C_4 hydrocarbyl, or heteroaryloxy C_1-C_4 hydrocarbyl; and

R^1 is a substituent containing a 5- or 6-membered cyclohydrocarbyl, heterocyclo, aryl or heteroaryl radical bonded directly to the depicted SO_2-group that is itself substituted at its own 4-position when a 6-membered ring and at its own 3- or 4-position when a 5-membered ring with a substituent R^3 selected from the group consisting of one other single-ringed cyclohydrocarbyl, heterocyclo, aryl or heteroaryl group, a C_3-C_{14} hydrocarbyl group, a C_2-C_{14} hydrocarbyloxy group, a phenoxy group, a thiophenoxy group, a 4-thiopyridyl group, a phenylazo group, a phenylureido group, a nicotinamido group, an isonicotinamido group, a picolinamido group, an anilino group and a benzamido group.

6. The compound according to claim 5 wherein said R^1 substituent is PhR^3 in which Ph is phenyl substituted with R^3 at the 4-position, and R^3 is a phenyl, phenoxy, thiophenoxy, phenylazo, benzamido, anilino, nicotinamido, isonicotinamido, picolinamido or phenylureido group

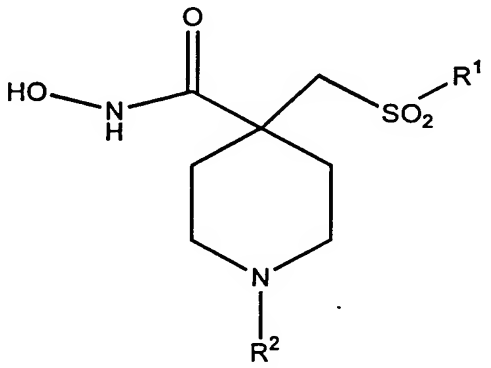
7. The compound according to claim 5 wherein said R^1 substituent is PhR^3 in which Ph is phenyl substituted with R^3 at the 4-position, and said R^3 is a phenyl, phenoxy, anilino or thiophenoxy

group that is optionally substituted at the meta- or para-position or both with a moiety that is selected from the group consisting of a halogen, a C_1-C_9 hydrocarbyloxy group, a C_1-C_{10} hydrocarbyl group, a di- C_1-C_9 hydrocarbylamino group, a carboxyl C_1-C_8 hydrocarbyl group, a C_1-C_4 hydrocarbyloxy carbonyl C_1-C_4 hydrocarbyl group, a C_1-C_4 hydrocarbyloxycarbonyl C_1-C_4 hydrocarbyl group and a carboxamido C_1-C_8 hydrocarbyl group, or is substituted at the meta- and para-positions by two methyl groups or by a methylenedioxy group.

8. The compound according to claim 5 wherein m is 2 and n is zero.

9. The compound according to claim 5 wherein m is 1 and n is 2.

10. A compound corresponding to Formula II:



II

wherein

R^2 is hydrido, C_1-C_8 hydrocarbyl, C_1-C_6 hydrocarbyloxycarbonyl C_1-C_4 hydrocarbyl, aryl C_1-C_4 hydrocarbyl, heteroaryl C_1-C_4 hydrocarbyl, aryloxy C_1-C_4 hydrocarbyl, or heteroaryloxy C_1-C_4 hydrocarbyl; and

R^1 is a substituent containing a 5- or 6-membered cyclohydrocarbyl, heterocyclo, aryl or heteroaryl radical bonded directly to the depicted SO_2-group that is itself substituted at its own 4-position when a 6-membered ring and at its own 3- or 4-position when a 5-membered ring with a substituent R^3 selected from the group consisting of one other single-ringed cyclohydrocarbyl, heterocyclo, aryl or heteroaryl group, a C_3-C_{14} hydrocarbyl group, a C_2-C_{14} hydrocarbyloxy group, a phenoxy group, a thiophenoxy group, a 4-thiopyridyl group, a phenylazo group, a phenylureido group, a nicotinamido group, an isonicotinamido group, a picolinamido group, an anilino group and a benzamido group.

11. The compound according to claim 10 wherein R^1 is a single-ringed aryl or heteroaryl group that is 5- or 6-membered, and is itself substituted at its own 4-position when a 6-membered ring and at its own 3- or 4-position when a 5-membered ring with a substituent selected from the group consisting of one other single-ringed aryl or heteroaryl group, a C_6-C_{14} hydrocarbyl group, a C_6-C_{14} hydrocarbyloxy group, a phenoxy group, a thiophenoxy group, a 4-thiopyridyl group, a phenylazo group a phenylureido group and a benzamido group.

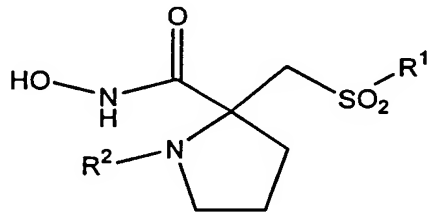
12. The compound according to claim 10 wherein said R^1 radical is PhR^3 in which Ph is phenyl substituted with R^3 at the 4-position, and R^3 is a phenyl, phenoxy, thiophenoxy, phenylazo, benzamido, nicotinamido, isonicotinamido, picolinamido or phenylureido group

13. The compound according to claim 10 wherein said R^1 radical is PhR^3 in which Ph is phenyl substituted with R^3 at the 4-position, and said R^3 is a phenyl, phenoxy or thiophenoxy group that is optionally substituted at the meta- or para-position or both with a moiety that is selected from the group consisting of a halogen, a C_1-C_9 hydrocarbyloxy group, a C_1-C_{10} hydrocarbyl group, a di- C_1-C_9 hydrocarbylamino group, a carboxyl C_1-C_8 hydrocarbyl group, a C_1-C_4 hydrocarbyloxy carbonyl C_1-C_4 hydrocarbyl group, a C_1-C_4 hydrocarbyloxycarbonyl C_1-C_4 hydrocarbyl group and a carboxamido C_1-C_8 hydrocarbyl group, or is substituted at the meta- and para-positions by two methyl groups or by a methylenedioxy group.

14. The compound according to claim 10 wherein said R^1 radical is PhR^3 in which Ph is phenyl substituted with R^3 at the 4-position, and said R^3 substituent is an benzamido, nicotinamido, an anilino, isonicotinamido, picolinamido or phenylureido group in which said R^3 substituent is optioinally substituted at its own meta- or para-

position or both with a moiety selected from the group consisting of a halogen, a nitro, a C_1-C_8 hydrocarbyl, a C_1-C_7 hydrocarbyloxy, an amino and an amino-C_2-C_4-hydroxyalkyl group.

15. A compound corresponding to Formula IV:



IV

wherein:

R^2 is hydrido, C_1-C_8 hydrocarbyl, C_1-C_6 hydrocarbyloxycarbonyl C_1-C_4 hydrocarbyl, aryl C_1-C_4 hydrocarbyl, heteroaryl C_1-C_4 hydrocarbyl, aryloxy C_1-C_4 hydrocarbyl, or heteroaryloxy C_1-C_4 hydrocarbyl; and

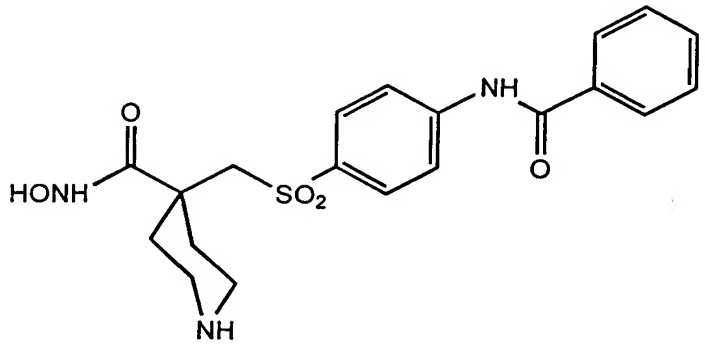
R^1 is a substituent containing a single aryl or heteroaryl radical bonded directly to the depicted SO_2-group that is itself substituted at its own 4-position when a 6-membered ring and at its own 3- or 4-position when a 5-membered ring with a substituent selected from the group consisting of one other single-ringed aryl or heteroaryl group, a C_3-C_{14} hydrocarbyl group, a C_2-C_{14} hydrocarbyloxy group, a phenoxy group, a thiophenoxy group, a 4-thiopyridyl

group, a phenylazo group, a phenylureido group, a nicotinamido group, an isonicotinamido group, a picolinamido group, an anilino group and a benzamido group.

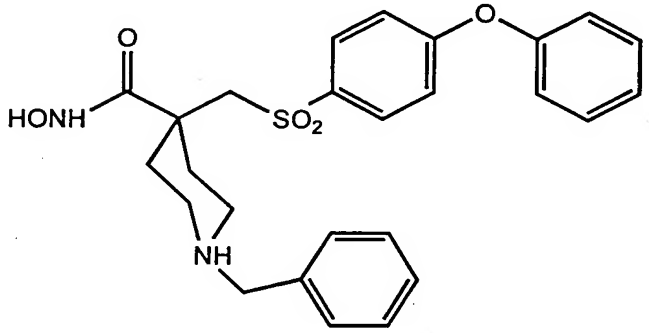
16. The compound according to claim 15 wherein said R^1 radical is PhR^3 in which Ph is phenyl substituted with R^3 at the 4-position, and R^3 is a phenyl, phenoxy, thiophenoxy, anilino, phenylazo, benzamido, nicotinamido, isonicotinamido, picolinamido or phenylureido group.

17. The compound according to claim 15 wherein said R^1 radical is PhR^3 in which Ph is phenyl substituted with R^3 at the 4-position, and said R^3 is a phenyl, phenoxy, anilino, thiophenoxy, benzamido, nicotinamido, isonicotinamido, picolinamido or phenylureido group that is optionally substituted at the meta- or para-position or both with a moiety that is selected from the group consisting of a halogen, a C_1-C_9 hydrocarbyloxy group, a C_1-C_{10} hydrocarbyl group, a di- C_1-C_9 hydrocarbylamino group, a carboxyl C_1-C_8 hydrocarbyl group, a C_1-C_4 hydrocarbyloxy carbonyl C_1-C_4 hydrocarbyl group, a C_1-C_4 hydrocarbyloxycarbonyl C_1-C_4 hydrocarbyl group and a carboxamido C_1-C_8 hydrocarbyl group, or is substituted at the meta- and para-positions by two methyl groups or by a methylenedioxy group.

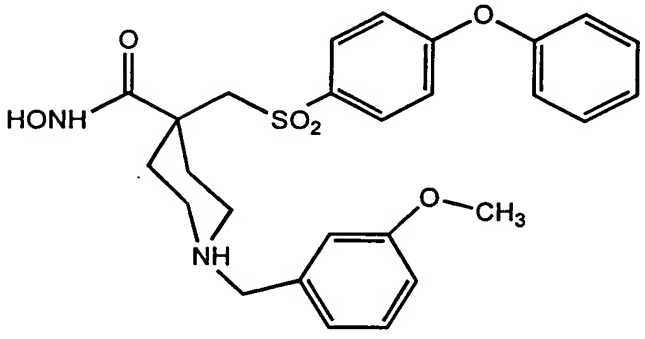
18. A compound corresponding in structure to the formula



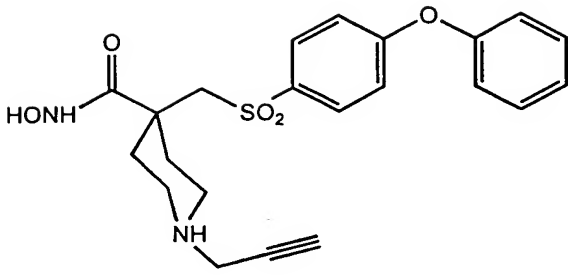
19. A compound corresponding in structure to the formula



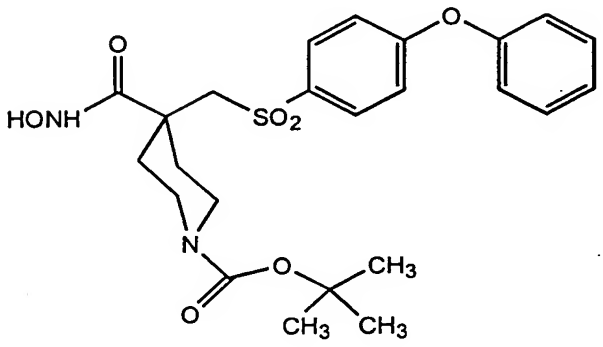
20. A compound corresponding in structure to the formula



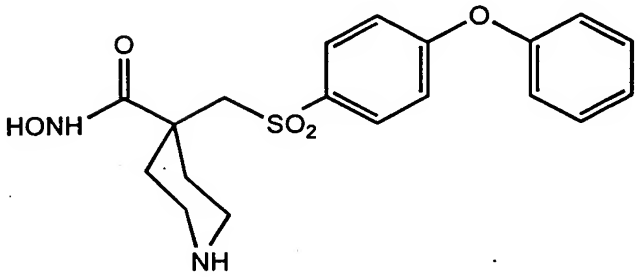
21. A compound corresponding in structure to the formula



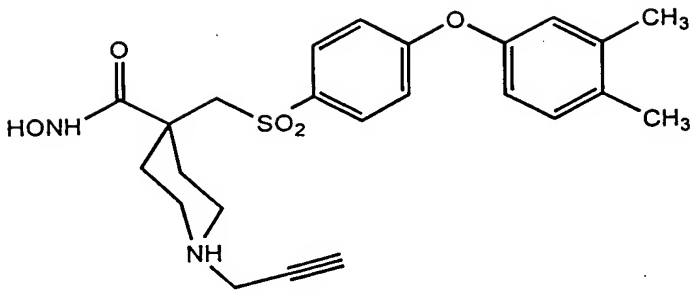
22. A compound corresponding in structure to the formula



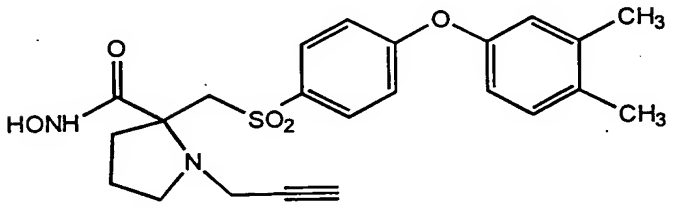
23. A compound corresponding in structure to the formula



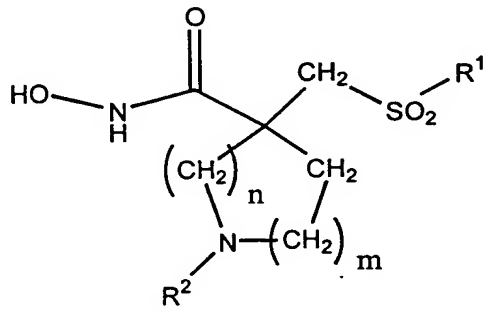
24. A compound corresponding in structure to the formula



25. A compound corresponding in structure to the formula



26. A process for treating a host mammal having a condition associated with pathological matrix metalloprotease activity that comprises administering a compound corresponding in structure to Formula I in an MMP enzyme-inhibiting effective amount to a mammalian host having such a condition:



I

wherein

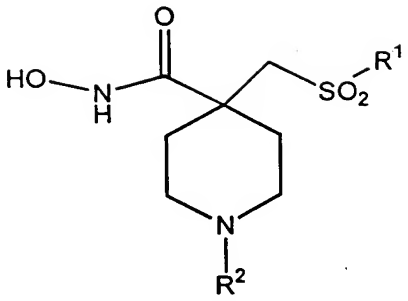
m is zero, 1, 2 or 3;

n is zero, 1, or 2, and the sum of m plus n is 1, 2 or 3;

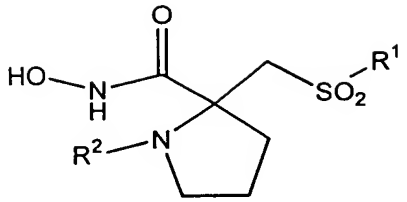
R^2 is hydrido, C_1-C_8 hydrocarbyl, C_1-C_6 hydrocarbyloxycarbonyl C_1-C_4 hydrocarbyl, aryl C_1-C_4 hydrocarbyl, heteroaryl C_1-C_4 hydrocarbyl, aryloxy C_1-C_4 hydrocarbyl, or heteroaryloxy C_1-C_4 hydrocarbyl; and

R^1 is a substituent containing a 5- or 6-membered cyclohydrocarbyl, heterocyclo, aryl or heteroaryl radical bonded directly to the depicted SO_2-group and having a length greater than about that of a hexyl group and less than about that of an eicosyl group, said R^1 defining a three-dimensional volume, when rotated about an axis drawn through the SO_2-bonded 1-position and the 4-position of a 6-membered ring radical or drawn through the SO_2-bonded 1-position and the center of 3,4-bond of a 5-membered ring radical, whose widest dimension in a direction transverse to the axis of rotation is about that of one furanyl ring to about that of two phenyl rings.

27. The process according to claim 26 wherein said compound corresponds in structure to either Formula II or Formula IV:



II



IV

28. The process according to claim 27 wherein R^1 is a single-ringed aryl or heteroaryl group that is 5- or 6-membered, and is itself substituted at its own 4-position when a 6-membered ring and at its own 3- or 4-position when a 5-membered ring with a substituent selected from the group consisting of one other single-ringed aryl or heteroaryl group, a C_3-C_{14} hydrocarbyl group, a C_2-C_{14} hydrocarbyloxy group, a phenoxy group, a thiophenoxy group, an anilino group, a 4-thiopyridyl group, a phenylazo group a phenylureido group, a nicotinamido group, an isonicotinamido group, a picolinamido group and a benzamido group.

29. The process according to claim 27 wherein said R^1 radical is PhR^3 in which Ph is phenyl substituted with R^3 at the 4-position, and R^3 is a phenyl, phenoxy, anilino, thiophenoxy, phenylazo, benzamido, nicotinamido, isonicotinamido, picolinamido or phenylureido group.

30. The process according to claim 29 wherein said R^1 radical is PhR^3 in which Ph is phenyl substituted with R^3 at the 4-position, and said R^3 is

a phenyl, phenoxy, anilino or thiophenoxy group that is optionally substituted at the meta- or para-position or both with a moiety that is selected from the group consisting of a halogen, a C_1-C_9 hydrocarbyloxy group, a C_1-C_{10} hydrocarbyl group, a di- C_1-C_9 hydrocarbylamino group, a carboxyl C_1-C_8 hydrocarbyl group, a C_1-C_4 hydrocarbyloxy carbonyl C_1-C_4 hydrocarbyl group, a C_1-C_4 hydrocarbyloxycarbonyl C_1-C_4 hydrocarbyl group and a carboxamido C_1-C_8 hydrocarbyl group, or is substituted at the meta- and para-positions by two methyl groups or by a methylenedioxy group.

31. The process according to claim 26 wherein said compound is administered a plurality of times.